

717 ARMORED JOINT WITH NEOPRENE STRIP SEAL

717.01 DESCRIPTION

Work consists of furnishing and erecting at various locations an armored joint with neoprene strip seal, including neoprene extrusions, steel angles, plates, extrusions, anchor studs, and fasteners as shown on the plans, as specified herein, and in accordance with the recommendations of the manufacturer.

717.02 MATERIALS

Materials shall meet the following requirements:

Steel Shapes, Plates, Extrusions and Anchor Studs - 815.01(A)

High Strength Bolts - 815.01(D)

Neoprene Strip Seal - The neoprene strip seal shall be extruded neoprene meeting requirements of ASTM D 2628 modified to omit the recovery test and having physical properties described as follows:

PROPERTY	ASTM TEST	REQUIREMENTS
Tensile strength	D 412	2,000 psi min.
Elongation at break	D 412	250 percent min.
Hardness, Type A durometer	D 2240 (modified)	60 +/- 5
Compression set, 70 hr. @ 212°F, maximum	D 395 Method B (as modified)	40 percent
Oven aging, 70 hr @ 212°F	D 573	
Tensile strength loss		20 percent max.
Elongation, loss		20 percent max.
Hardness, Type A durometer points change)		0 to + 10
Ozone resistance	D 1149	No cracks
20 percent strain, 300 pphm, in air at 104°F (wiped with toluene to remove contamination)		

Adhesive - Adhesive to bond strip seal to steel extrusion shall be as recommended by the manufacturer.

717.03 SHOP DRAWINGS

The Contractor shall verify all dimensions to insure the accuracy of the joint prior to fabrication.

Required shop drawings shall indicate the type, location and details of the mechanical devices required to compress the joint to its required width based on the ambient temperature at the time of erection.

717.04 FABRICATION

The armored joint with neoprene strip seal shall be shop assembled and delivered to the job site ready for installation. The neoprene extrusion shall run continuously through the full width of the joint, including concrete barriers and sidewalks. No splices will be permitted in the neoprene seal. Splices of steel extrusions shall develop the full strength of the extrusion. Structural steel shall be fabricated per 706. All metal portions of the expansion joints not in direct contact with the neoprene strip seal shall be shop painted per 707.

717.05 CONSTRUCTION REQUIREMENTS

Immediately prior to installation, the neoprene strip seal shall be examined to insure that the seal is fully inserted in the recess. After the armored joint has been set to its proper line and grade and securely attached, all the temporary mechanical devices shall be removed and become the property of the Contractor.

After the armored joint has been erected and after all adjacent concrete has been placed, the joint shall be cleaned and painted in conformance with 707 for new metalwork.

717.06 MEASURE AND PAYMENT

The unit of measure for Armored Joint with Neoprene Strip Seal will be the linear foot, complete and in place.

Armored Joint with Neoprene Strip Seal will be paid at the contract unit price per linear foot, which payment will include painting and all labor, materials, tools, equipment and incidentals necessary to complete the work as specified herein.